

CORRES. CONTROL
INCOMING LTR NO.



01142 RF 97

DUE DATE
ACTION

Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

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distribution

AUG 8 1997

Tim Rehder
U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, Colorado 80202-2466

Susan Chaki
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Dear Ms. Chaki and Mr. Rehder:

The revised Draft Decision Document for the Mound Site Plume and response to comments are attached. Based on the meeting held on July 17, 1997, with staff from the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE), a redline version of the document is being submitted. In order to begin public comment in mid-August, we would like a concurrent review between the EPA, CDPHE, DOE/Rocky Flats Field Office, and Kaiser-Hill, and are requesting comments by August 8, 1997.

If you should have any technical questions regarding this request, please contact Norma I. Castaneda at (303)966-4226 or contact me at (303)966-4298.

Bob April

Bob April, Group Lead
Regulatory Liaison

Enclosure

cc w/Enc:
R. Greenberg, EM-45, HQ
J. Ciocco, EM-45, HQ
G. Kleeman, EPA
C. Spreng, CDPHE

COR. CONTROL X X
ADMIN. RECORD
PATS/T130G

Reviewed for Addressee
Corres. Control RFP

8-1-97 DG
Date By

Ref Ltr. #

cc wo/Enc:
T. Howell, OCC
S. Slaten, RLG
R. Tyler, ER/WM
N. Castaneda, ER/WM
J. Uhland, K-H
A. Tyson, RMRS
Administrative Record

OE ORDER #

ADMIN RECORD

1113-B-00012



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

 999 16th STREET - SUITE 500
 DENVER, COLORADO 80202-2480

JUL 11 1997

Ref: SEPR-F

 Mr. Steve Slaten
 Department of Energy
 Rocky Flats Office
 P.O. Box 928
 Golden, CO 80402-0928

 Re: Modification to OU 2 Surface Water IM/IRA
 (Draft Mound Site Plume Decision Document and Administrative
 Transfers)

Dear Mr. Slaten:

EPA has reviewed the draft Mound Site Plume Decision Document and the Administrative Transfer attachment which comprise the major modification to the OU 2 Surface Water Interim Measure/Interim Remedial Action. In general, EPA supports this modification and the proposed remedial action that is designed to passively collect and treat contaminated groundwater so that down gradient surface water will be protected. The following comments delineate items for improvement, revision or reconsideration in the decision document.

General Comments

Much data has been gathered in the past year to better characterize the geology, hydrogeology and location of contaminants in this area. In order to optimize the design of the groundwater collection system, this data and data previously collected must be presented in a series of maps, cross sections and tables that will clearly show water table elevations, groundwater flow directions, unsaturated zones, bedrock surface, lithology, and contaminant plumes. These types of visual presentations of the data will be of great benefit in determining where the collection system will need to be placed in order to completely capture contaminated groundwater in this area. Based on these maps, it may be necessary to dog leg the western end of the collection system in a more north-south orientation, so as to collect groundwater that may be flowing into the area from the west.

Post-It® Fax Note	7671	Date	8 of 1 pages
To	John Hopkins	From	
Co./Dept.		Co.	
Phone #		Phone #	
Fax #	5198	Fax #	



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Specific Comments

1. Section 4.1 Proposed Action

It is stated here that collection of SW059 water may not be possible for a period of up to one month due to the necessity of decommissioning the existing system prior to the new installation. Construction activities need to be planned so that the period of noncollection is of the minimum duration possible. Temporary methods of collection should also be considered. ✓

2. Table 6 Schedule for Sampling

In order to better evaluate the effectiveness of the treatment system, the sampling frequency of the treatment system influent and effluent should be on a monthly basis for at least months 2 through 6. If during that time, analytical results are consistently acceptable, the remainder of the proposed schedule would be acceptable. ✓

3. Section 4.2 Worker Health and Safety

Since the time that this draft was written, all analytical results of soil samples have been received upon which radiological controls would be based. These results should be presented and the required radiological controls should be stated in this portion of the document. ✓

4. Section 5.5. Flora and Fauna

This section discusses possible impacts to wetlands from changes in groundwater levels resulting from the collection system and/or from construction activities. In order to accurately mitigate these impacts, it is necessary to first conduct a thorough survey of the type and extent of wetlands in the area that could be impacted. This wetland delineation must be completed and submitted prior to the initiation of any construction activities at the site of this action, but need not be part of the decision document. ✓

The Administrative Transfers proposed in Attachment 2 of the OU 2 IM/IRA Modification are acceptable to EPA. However, since this attachment only outlines the general approach that will be taken, formal approval of the modifications to the OU 1 IM/IRA and the OU 2 monitoring obligations will be contingent upon review of the specifics presented in those documents which have not yet been submitted to EPA. ✓

If you have any comments or questions, please contact Gary Kleeman at 312-6246.

Sincerely,

Tim Rehder
Tim Rehder, Manager
Rocky Flats Project



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07/11/97 FRI 14:08 FAX

cc: Norma Castenada DOE
Carl Spreng, CDPHE
Jennifer Uhland, Kaiser-Hill
Gail Hill, DOE

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Author: John Hopkins at mail1
Date: 7/17/97 1:12 PM
Priority: Normal
TO: Annette Primrose at ALPHA10
Subject: Draft Responses to EPA Comments

----- Message Contents -----

General Comments

Based on July 16, 1997 meeting to discuss EPA and CDPHE comments, the draft Decision Document for the Mound Site Plume will be updated to include the data currently being used to design the collection system, including a cross-section along the drain alignment, a bedrock surface map, a water level map and a figure showing the location of geoprobe monitoring wells and concentrations of total volatile organic contaminants in the wells. ✓

Specific Comments

1. The Site will work to minimize the period of non-collection of SW059 water. However, the collection trench will be excavated through that area. If the trench has to be dewatered, the water will be collected and treated in the B891 Treatment Facility.

2. We will modify the sampling table to show monthly sampling for the first 6 months. The EPA SITE Program will be monitoring performance of the system for months 1 through 12. The Site has requested the EPA SITE Program to provide us with a test plan for comment and we will also request that both EPA Region VIII and CDPHE review and comment on the test plan. ✓

3. Recent analytical results of soil sampling will be incorporated into the document. ✓

4. The Site is planning to initiate a wetlands survey this week and coordinate with EPA on wetlands mitigation issues for the Mound Site Plume Project.

Author: John Hopkins at mail1
Date: 7/17/97 2:53 PM
Priority: Normal
TO: Annette Primrose at ALPHA10
Subject: Draft Response to CDPHE Comments

----- Message Contents -----

1,2,5,7 and 9

Based on July 16, 1997 meeting to discuss EPA and CDPHE comments, the draft Decision Document for the Mound Site Plume will be updated to include the data currently being used to design the collection system, including a cross-section along the drain alignment, a bedrock surface map, a water level map and a figure showing the location of geoprobe monitoring wells and concentrations of total volatile organic contaminants in the wells. The cross-section used in the Sampling and Analysis Plan will also be updated and included in the Decision Document. ✓

3. The terminology will be consistent throughout the Decision Document.

4. Figure 1 and the text will be corrected to show the trench location being used for system design. ✓

6. Comment noted.

8. Win Chromec will talk with Carl Spreng to review data used to derive background numbers and sufficient information will be added to the text to clarify how calculations were derived. 2

✓ 10. Design flow information will be added to the text.

11. The text will be revised and existing well ____ will be proposed for downstream monitoring.

12. Influent monitoring will be added to the table. ✓

13. Footnote 1 will be changed. ✓

STATE OF COLORADO

Roy Romer, Governor
Patti Shwayder, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION

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Colorado Department
of Public Health
and Environment

July 3, 1997

Mr. Tim Rehder
U.S. Environmental Protection Agency, Region 8
999 18th Street, Suite 500, 8HWM-FF
Denver, CO 80202-2405

Dear Tim:

We have attached a list of our comments the **Draft Mound Site Plume Decision Document**, dated June 16, 1997. It is our opinion that this document presents inadequate information for this decision. It does not present the recent investigation in sufficient detail nor does it integrate previous information into a coherent conceptual model with visual documentation.

This document needs revision before any further decisions are made to go ahead with this project. This is the public record for this project. It should be clearly written and supported with readable maps and cross sections. The extent of contamination should be defined in the alluvium/colluvium and in the Arapahoe sandstone. The relationship of the intercept system to the plumes in both parts of the UHSU must be shown.

Should you or your staff have any questions please contact Carl Spreng, 692-3358 or Elizabeth Pottorff, 692-3586.

Sincerely,

Susan Chaki
Corrective Action Unit

enclosure

cc: Gail Hill, DOE-RFFO
Christine Dayton, K-H
Gary Kleeman, EPA
Steve Tarlton

Norma Castañeda, DOE-RFFO
Jennifer Uhland, K-H
Laura Perrault, AGO

**Colorado Department of Public Health and Environment
Division of Hazardous Materials and Waste Management**

comments on

**Mound Site Plume Decision Document (Draft)
June 16, 1997**

1. This document or another report needs to bring together the current understanding of the hydrogeology of this site. The referenced reports are old or incomplete with respect to the relationships between contaminant source, contaminant pathway and the current plan. The conceptual model on which this remedial project is based needs to be thoroughly presented in a publicly available document. ✓
2. Section 3.3
The conceptual model should be supported with cross sections and maps at a readable scale of the hydrogeology of this site. Show the discharge relationships between the seeps and the plume in the colluvium. Cite local well information regarding the low permeability of the claystone. Show the spatial relationships of the seeps to the subcropping geology. *x-section Figure 2*

Provide a head map of the area around seep SW059 showing all sources of water to this seep. It would appear from general maps that there are sources from the west. Document all unsaturated areas with supporting data.
3. Sections 3.3 and 3.4
On pages 7 and 8, the term "Number One Sandstone" is used. This terminology conflicts with the name, Arapahoe No. 1 Sandstone, used earlier on page 6 and in previous reports. ✓
4. Section 3.3
The location of the interceptor trench on Figure 1 does not correspond to the statement at the end of Section 3.3 that, "groundwater interception will occur between geoprobe holes 10297 and 11097." *new figure 2* ✓
5. Section 3.4
According to the first paragraph of this section, the relationships between the seeps and subcropping geology is unclear. These relationships, however, are key to the location of the intercept system. These seeps should be located on a map showing their relationship to the subcropping bedrock. Neither of the references listed is adequate to support the conceptual model that should be developed and confirmed with the results of the 1997 investigation. *Reference new maps/conceptual model in this document*

The source of the VOCs in the Arapahoe sandstone needs to be related to the position of the seeps and the new information from this investigation needs to show the location of the plume in the colluvium. Was contamination in the lower saturated bedrock (i.e. second line of seeps) investigated? Can it be shown that the contamination is entirely in the colluvium or that the weathered portion of the bedrock contains minimal contamination?

Better described in text now

GW reaches surface here

This presentation also needs supporting figures such as cross sections and maps to tie the previously known information to the current investigation and update the conceptual model.

6. Table 3

Ground water background values for uranium and some metals may change depending on the results of additional evaluation by the ground water working group.

Contrary to the footnote concerning the surface water action level for americium, the intent of RFCA on the value of that action level prior to January 1998 is clear. Section 2.2.A.2.b of Attachment 5 clearly implies that the existing standard for nitrate will apply until the temporary modification takes effect in January 1998. The same implication exists for plutonium and americium in Section 2.2.B.1. This is also the understanding of all the stakeholders, including the cities, involved in reaching the decision to postpone applying the new state-wide basic standards to the Walnut Creek drainage until the new water supply replacement for Great Western Reservoir was in place.

7. Section 3.5

A map of the plume should be included in this section.

8. Section 3.6

The statement about background comparisons in the first sentence of the second paragraph is true for groundwater, but not for surface water.

The derivation of seep water background values is unclear. Are seep background values calculated with surface water or separately? Do they correspond to the M2SDs listed in the Background Report?

Background values calculated from unimpacted seep waters and historic values for seep SW059 should be distinguished. The derivation of the seep water background value of 0.5 pCi/l for plutonium is unclear.

9. Section 4.0

Show a map with the alignment of the collection system with respect to the plume. It needs to be clear what portion of the plume will be intercepted. The concentration and volume in the non-intercepted portion of the plume should be documented or estimated. What will the impact of the intercept system be on this portion of the plume?

10. Section 4.1.2

In order to evaluate the adequacy of the treatment system, the design flow volume should be stated.

Testing by Sandia demonstrated the removal capability of the treatment system with respect to metals and radionuclides. The bench scale testing by ETI, however, did not provide influent versus effluent concentration results for radionuclides.

11. Section 4.1.3.2

Groundwater from the cut off plume needs to be monitored as well, the extent and concentration should be determined so that the downgradient impacts can be evaluated. Tier II well 75992 should be evaluated for its appropriateness for long-term monitoring of this area.

12. Table 6

Section 4.1.3.1 states that the influent to the treatment system will be sampled. This sampling is not included in the Table 6 schedule.

13. Table 7

Footnote 1 should state: "Temporary Modification, effective from 3/97 to 12/09."

STATE OF COLORADO

Roy Romer, Governor
Patti Shwayder, Executive Director

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HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION

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Colorado Department
of Public Health
and Environment

July 15, 1997

Gail Hill
Acting Lead, Regulatory Liaison Group
Office of Environmental Compliance
Department of Energy-RFFO
P.O. Box 928
Golden CO 80402-0928

RE: Modification to OU 2 Surface Water IM/IRA (Draft Mound Site Decision Document and Administrative Transfers)

Dear Ms. Hill:

The Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment supports the modifications to OU 2 Surface Water IM/IRA outlined in your letter of June 30, 1997 (97-DOE-05096). The Division previously provided comments on the Draft Mound Site Plume Decision Document in an attachment to correspondence sent to you July 3, 1997.

The Division agrees with the concepts outlined in the OU2 IM/IRA Administrative Transfers. For final approval of these proposed transfers, specific modifications to the documents involved must be submitted. Once all the elements of the OU2 IM/IRA have been transferred, a proposal to close that document will be considered.

If you have any questions regarding these matters, please contact Carl Spreng at 692-3358.

Sincerely,

Susan Chaki
Corrective Action Unit Leader
Federal Facilities Program

cc: Norma Castefieda, DOE-RFFO
Jennifer Uhland, Kaiser-Hill
Tim Rehder, EPA
Laura Perrault, AGO
Steve Tarlton, RFPU

**Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division**

Comments on Revised Draft Mound Site Plume Decision Document - July 28, 1997:

1. Proposed modification to the last sentence of the third paragraph of Section 3.5:
~~"From this point, the contaminated groundwater continues to flow northward towards South Walnut Creek, however, it now flows in the colluvium or weathered bedrock.~~
2. Table 4 should explain that the values listed as background are the background mean plus two standard deviations (M2SD). The background value for plutonium (0.5 pCi/L) was calculated from data in Table D-31 of the *Background Geochemical Characterization Report*. Since this table is labeled "sitewide", it is unclear if this data can truly serve as background. This value is 10-times the background value listed for groundwater and 25-times the background value for surface water. Since background levels are used to dismiss chemicals from being contaminants of concern, a level which is 10-times the stream standard needs further explanation.
3. The fourth paragraph of Section 3.6 should clarify (as the previous paragraph does) that the background levels against which the SW059 plutonium concentrations are measured are background mean plus two standard deviations (M2SD). The reference to Figure 2 should be to Figure 7.
4. The last sentence of the last paragraph of Section 3.6 should be modified:
~~"Metals and radionuclides above action levels, but which are not considered contaminants of concern because they are below background levels are asterisked in Tables 3 and 4."~~
5. It is unclear why the text at the end of the second paragraph of Section 4.1 was changed from "surface water" to "groundwater". Section 4.1.2 (Treatment and Discharge) does not describe the discharge of treated water, and figures 1, 2, 4, 5, and 6 appear to show the water being discharged to South Walnut Creek.
6. The third paragraph in Section 4.1.1 states that work will be halted if "unexpected levels of radioactivity are encountered in the soil." It is unclear how these levels will be determined if "radiological monitoring will not be performed" as stated earlier in the paragraph.

NATURE SAVER™ FAX MEMO 01616		Date	8/12/97	for pages	1
To	Gary Kleeman				
From	Carl Spreng				
Co./Dept.	EPA				
Co.					
Phone #					
Phone #					
Fax #	312-6067				
Fax #					

NATURE SAVER™ FAX MEMO 01616		Date	8/12/97	for pages	1
To	Annette Primrose				
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Phone #					
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Fax #	966-5198				
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